This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Municipal permit. The discharge results from the operation of a 0.0036 MGD wastewater treatment plant. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-05 et seq.

1. Facility Name and Mailing Address: Abrahms Ct STP, 202 Mistro Ct, Stafford, VA 22554 — SIC Code: 4952

   Facility Location: Abrahms Ct, Stafford, VA 22554 — County: Stafford

   Facility Contact Name: Don Anderson — Telephone Number: 540-841-5009

2. Permit No.: VA0092479 — Expiration Date of previous permit: New Issuance

   Other VPDES Permits associated with this facility: NA

   Other Permits associated with this facility: NA

   E2/E3/E4 Status: NA

3. Owner Name: Anderson Contracting Services

   Owner Contact: Don Anderson — Telephone Number: 540-841-5009

4. Application Complete Date: 3/17/09

   Permit Drafted By: Alison Thompson — Date Drafted: 5/27/09

   Draft Permit Reviewed By: Joan C. Crowther — Date Reviewed: 6/1/09

   Public Comment Period: Start Date: — End Date:

5. Receiving Waters Information: See Attachment 2 for the Flow Frequency Determination

Receiving Stream Name:	Aquia Creek, UT		
Drainage Area at Outfall:	<5 sq.mi.	River Mile:	0.18
Stream Basin:	Potomac River	Subbasin:	Potomac River
Section:	4b	Stream Class:	III
Special Standards:	b, PWS	Waterbody ID:	VAN-A27R
7Q10 Low Flow:	0.0 MGD	7Q10 High Flow:	0.0 MGD
1Q10 Low Flow:	0.0 MGD	1Q10 High Flow:	0.0 MGD
Harmonic Mean Flow:	0.0 MGD	30Q5 Flow:	0.0 MGD
303(d) Listed:	No	30Q10 Flow:	0.0 MGD
TMDL Approved:	PCBs	Date TMDL Approved:	10/31/07

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

   ✓ State Water Control Law
   ✓ Clean Water Act
   ✓ VPDES Permit Regulation
   ✓ EPA NPDES Regulation
   ✓ EPA Guidelines
   ✓ Water Quality Standards
   ✓ Potomac Embayment Policy (9 VAC 25-415 *et seq.*)

7. Licensed Operator Requirements: Class III

8. Reliability Class: Class I

9. Permit Characterization:

✓	Private		Effluent Limited		Possible Interstate Effect
	Federal	✓	Water Quality Limited		Compliance Schedule Required
	State		Toxics Monitoring Program Required		Interim Limits in Permit
	POTW		Pretreatment Program Required		Interim Limits in Other Document
✓	TMDL				

10. Wastewater Sources and Treatment Description:

The proposed facility is a privately owned wastewater treatment plant serving seven single family homes with a design flow of 0.0036 MGD.

The proposed wastewater treatment plant consists of a HighStrengthFAST® package plant by Bio-Microbics Inc. The system is a fixed activated sludge treatment system in an aerobic, packed bed bioreactor. The application states that the effluent will be treated with UV disinfection prior to discharge.

See the permit issuance file for a facility schematic/diagram and the manufacturer's specifications of the system.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Design Flow	Outfall Latitude and Longitude
001	Domestic Wastewater	See Item 10 above.	0.0036 MGD	38° 30' 18" N 77° 33' 38" W

See Attachment 1 for (USGS Stafford Quadrangle, DEQ #182B) topographic map.

11. Sludge Treatment and Disposal Methods:

The sludge will be hauled to the Aquia WWTP for further treatment and disposal.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge

TABLE 2 – Items of interest near the discharge	
1AAUA014.51	Virginia DEQ Ambient Water Quality Monitoring Station on Aquia Creek at State Route 641, upstream of the confluence of Austin Run and Aquia Creek.
Public Water Supply	Smith Lake Water Treatment Plant water supply intake at Smith Lake (impoundment of Aquia Creek). Smith Lake is also known as Aquia Reservoir and is upstream of the confluence of Austin Run and Aquia Creek.
VA0083461	Smith Lake Water Treatment Plant minor industrial discharge to a UT of Aquia Creek.
1AAUA019.99	Virginia DEQ Ambient Water Quality Monitoring Station located on Aquia Creek approximately 5.3 rivermiles downstream from the proposed Outfall for VA0092479
VAG846022	Vulcan Materials Stafford Quarry (formerly VA0054895) industrial discharge from three outfalls to Aquia Creek.
VA0060968	Discharge to UT, Austin Run from Outfall 001 of the Aquia WWTP.
1AAUA003.71	Virginia DEQ Ambient Water Quality Monitoring Station located on Aquia Creek at the Railroad Bridge. (Aquia Creek is tidal at this location.)

13. Material Storage:

The facility is not built so no materials are stored onsite.

14. Site Inspection:

The site inspection was completed by Alison Thompson and Joan Crowther on June 19, 2009. A copy of the inspection report is in Attachment 2.

15. Receiving Stream Water Quality and Water Quality Standards:

a) Ambient Water Quality Data

The nearest downstream DEQ water quality monitoring station with ambient data is Station 1AAUA019.99, located at the Route 610 (Garrisonville Road) bridge crossing. This station is located on Aquia Creek approximately 5.3 rivermiles downstream from the proposed Outfall for VA0092479. The assessment unit for this portion of Aquia Creek (VAN-A27R_AUA02A02) extends for 8.17 rivermiles, from the headwaters of Aquia Creek, downstream until the confluence with Cannon Creek, approximately 0.1 rivermiles downstream from Route 610. The following is a monitoring summary for Assessment Unit VAN-A27R_AUA02A02, as taken from the 2008 Integrated Assessment: *Minimal sampling events occurred during the 2008 assessment period. There is insufficient information to determine support for the aquatic life and wildlife uses. The fish consumption, public water supply, and recreation uses were not assessed.*

Segment VAN-A27R_AUA01A00 of Aquia Creek is listed as impaired for not meeting the water quality recreational use standard due to exceedances of the *E. coli* bacteria criterion. VAN-A27R_AUA01A00 extends from the confluence of Aquia Creek with Cannon Creek, approximately 0.1 rivermile downstream from Route 610, and continues downstream until Smith Lake (Aquia Reservoir). Sufficient excursions from the maximum *E. coli* bacteria criterion (3 of 15 samples - 20.0%) were recorded at DEQ's ambient water quality monitoring station (1aAUA014.51) at the Route 641 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 2004 through 2006. The *E. coli* bacteria impairment was first listed in 2006.

Segment VAN-A28E_AUA01B00 of Aquia Creek is listed as not meeting the (1) recreational water quality use standard (2) aquatic life use standard and wildlife use standard and (3) fish consumption use standard. Segment VAN-A28E_AUA01B00 extends from rivermile 4.28 to rivermile 3.28 in Aquia Creek encompassing a 0.5-mile radius around station 1aAUA003.71.

1. ***Recreational Use Impairment:*** Sufficient excursions from the maximum enterococcus bacteria criterion (4 of 24 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station (1aAUA003.71) at the railroad crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment.

2. ***Aquatic Life Use and Wildlife Use Impairments:*** For the 2004 assessment, more than two chloride exceedances were recorded within a three-year period resulting in an assessment of not supporting the aquatic life use goal. While the data within the 2008 assessment period show no exceedances at DEQ ambient station 1aAUA003.71, the impairment remains because no new data has been collected since the 2004 assessment period. This segment is considered transition zone tidal waters. The Water Quality Standards stipulate that the more stringent of either the freshwater or saltwater criteria apply. Therefore, these waters are listed as impaired. However, a TMDL is not necessary as the chloride levels are attributable to the natural estuarine conditions.

3. ***Fish Consumption Use Impairment:*** The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 4/19/99 and modified 12/13/04, limits consumption of American eel, bullhead

catfish, channel catfish less than eighteen inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the consumption of carp and channel catfish greater than eighteen inches long. The affected area includes the tidal portions of the following tributaries and embayments from the I-395 bridge (above the Woodrow Wilson Bridge) to the Potomac River Bridge at Route 301: Fourmile Run, Hunting Creek, Little Hunting Creek, Pohick Creek, Accotink Creek, Occoquan River, Neabsco Creek, Powells Creek, Quantico Creek, Chopawamsic Creek, Aquia Creek, and Potomac Creek.

In addition, it should be noted that all of the estuarine waters of Aquia Creek are listed as impaired for not meeting the fish consumption use due to PCBs in fish tissue. The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 4/19/99 and modified 12/13/04, limits consumption of American eel, bullhead catfish, channel catfish less than eighteen inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the consumption of carp and channel catfish greater than eighteen inches long. The affected area includes the tidal portions of the following tributaries and embayments from the I-395 bridge (above the Woodrow Wilson Bridge) to the Potomac River Bridge at Route 301: Fourmile Run, Hunting Creek, Little Hunting Creek, Pohick Creek, Accotink Creek, Occoquan River, Neabsco Creek, Powells Creek, Quantico Creek, Chopawamsic Creek, Aquia Creek, and Potomac Creek.

A copy of the Planning Statement has been placed in the permit issuance file.

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260 (360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream unnamed tributary to Aquia Creek is located within Section 1b of the Potomac River Basin, and classified as Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/l or greater, a daily average D.O. of 5.0 mg/l or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 3 details other water quality criteria applicable to the receiving stream.

Ammonia:

The critical flows for the receiving stream are zero and the facility is not built. A temperature value of 25°C and a pH value of 8.0 S.U. were used to calculate the ammonia water quality standards. The ammonia water quality criteria calculations are shown in Attachment 3.

Metals Criteria:

There is no hardness data for this facility. Staff guidance suggests using a default hardness value of 50 mg/l $CaCO_3$ for streams east of the Blue Ridge. The hardness-dependent metals criteria in Attachment 3 are based on this default value.

Bacteria Criteria:

The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

E. coli bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean[1]	Single Sample Maximum
Freshwater *E. coli* (N/100 ml)	126	235

[1]For two or more samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Aquia Creek, UT is located within Section 1b of the Potomac Basin. This section has been designated with a special standard of b, PWS.

Special Standard "b" (Potomac Embayment Standards) established effluent standards for all sewage plants discharging into Potomac River embayments and for expansions of existing plants discharging into non-tidal tributaries of these embayments. 9 VAC 25-415, Policy for the Potomac Embayments controls point source discharges of conventional pollutants into the Virginia embayment waters of the Potomac River, and their tributaries, from the fall line at Chain Bridge in Arlington County to the Route 301 bridge in King George County. The regulation sets effluent limits for $cBOD_5$, total suspended solids, phosphorus, and ammonia (April 1st through October 31st), to protect the water quality of these high profile waterbodies.

Special Standard PWS designates a public water supply intake. The Board's Water Quality Standards establish numerical standards for specific parameters calculated to protect human health from toxic effects through drinking water and fish consumption. See 9 VAC 25-260-140 B for applicable criteria.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified. The results of the database search can be found in the permit issuance file.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on an evaluation of the 7Q10 and 1Q10 MGD. With the receiving stream flows equally 0.0 MGD under critical conditions, the stream has the potential to be composed entirely of effluent. As such, a Tier 1 designation is appropriate and the existing uses will be maintained. Permit limits proposed have been established by determining wasteload allocations or applying the "Policy for the Potomac River Embayments" which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development :

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:

The facility is proposed, so there is no effluent data to review.

Based on the treatment proposed, Ammonia as Nitrogen (November – March) will require a wasteload analysis during this permit issuance.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f) (Q_s)] - [(C_s) (f) (Q_s)]}{Q_e}$$

Where:
- WLA = Wasteload allocation
- C_o = In-stream water quality criteria
- Q_e = Design flow
- Q_s = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for chronic ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
- f = Decimal fraction of critical flow
- C_s = Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o.

c) Effluent Limitations Toxic Pollutants, Outfall 001 –

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

The ammonia effluent limitation for April 1st through October 31st is set by the "Policy for the Potomac River Embayments" (9 VAC 25-415-40). During this period, the ammonia effluent monthly average limit is 1.0 mg/l.

The ammonia effluent limitation for November 1st through March 31st is based on the ammonia criteria found in Attachment 3. DEQ guidance suggests using a sole data point of 9.0 mg/L for discharges containing domestic sewage to ensure the evaluation adequately addresses the potential for ammonia to be present in the discharge containing domestic sewage. The limit derivation is found in Attachment 4.

d) Effluent Limitations and Monitoring, Outfall 001– Conventional and Non-Conventional Pollutants

$cBOD_5$, TSS, Ammonia (April – October) and Total Phosphorus limitations are based on the Policy for the Potomac River Embayments (9 VAC 25-415 *et.seq*.). Dissolved Oxygen and Ammonia (November – March) limitations are based on Water Quality Standards. pH limitations are set at the water quality criteria. *E. coli* limitations are in accordance with the Water Quality Standards 9 VAC25-260-170.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for Flow, $cBOD_5$, Total Suspended Solids, Ammonia as Nitrogen, pH, Dissolved Oxygen, *E. coli*, and Total Phosphorus.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/l), with the flow values (in MGD) and a conversion factor of 3.785. The weekly averages were determined using a 1.5 multiplier.

Sample Types established in the permit are in accordance with the VPDES Permit Manual recommendations.

The VPDES Permit Regulation at 9 VAC 25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for CBOD and TSS (or 65% for equivalent to secondary). The limits in this permit are water-quality-based effluent limits and result in greater than 85% removal.

18. Antibacksliding:

This is a permit issuance. Backsliding does not apply to this issuance.

19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.0036 MGD.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/M	EST
pH	3	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
$CBOD_5$	5	5 mg/l 0.07 kg/d	8 mg/l 0.11 kg/d	NA	NA	1/M	Grab
Total Suspended Solids (TSS)	5	6.0 mg/l 0.08 kg/d	9.0 mg/l 0.12 kg/d	NA	NA	1/M	Grab
Dissolved Oxygen	3	NA	NA	6.0 mg/l	NA	1/D	Grab
Ammonia, as N (April 1st –October 31st)	5	1.0 mg/l 0.01 kg/d	1.5 mg/l 0.02 kg/d	NA	NA	1/M	Grab
Ammonia, as N (November 1st – March 31st)	3	2.4 mg/l	2.4 mg/l	NA	NA	1/M	Grab
E. coli (Geometric Mean)	3	126 n/100mL	NA	NA	NA	2/M	Grab
Total Phosphorus	5	0.18 mg/l 0.002 kg/d	0.27 mg/l 0.004 kg/d	NA	NA	1/M	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements
2. Best Professional Judgement
3. Water Quality Standards
4. DEQ Disinfection Guidance
5. Policy for the Potomac Embayments

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.
EST = Estimated.

.1/D = Once every day
1/M = Once every month.
2/M = Twice every month, >7 days apart

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements:

a) Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

a) 95% Capacity Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.B.2. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. The facility is a PVOTW.

b) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. Within 90 days of the issuance of the CTO, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

c) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.

d) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9 VAC 25-31-200 D, and Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. This facility requires a Class III operator.

e) Reliability Class. The Sewage Collection and Treatment Regulation at 9 VAC 25-790 requires sewerage works achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. The facility is required to meet a Reliability Class I.

f) Sludge Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.C.4. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.

g) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

h) Sludge Use and Disposal. The VPDES Permit Regulation at 9 VAC 25-31-100.P., 220.B.2., and 420-720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.

i) Financial Assurance. Required by Code of Virginia §62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9 VAC 25-650-1, et seq. which requires owners and operators of PVOTWs with a design flow >0.005 MGD but <0.040 MGD and treating sewage from private residences to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. The permitted facility is a PVOTW with a design flow of 0.0036, and treats sewage generated from private residences. The financial assurance mechanism shall be required to be in place prior to the issuance of the CTO for the facility.

j) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.

k) TMDL Reopener: This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may to developed and approved for the receiving stream.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

a) Special Conditions:
This is a new issuance.

b) Monitoring and Effluent Limitations:
This is a new issuance.

25. Public Notice Information:

First Public Notice Date: Second Public Notice Date:

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: Northern DEQ Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3834, alison.thompson@deq.virginia.gov. See Attachment 5 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

Segment VAN-A27R_AUA01A00 of Aquia Creek is listed as impaired for not meeting the water quality recreational use standard due to exceedances of the *E. coli* bacteria criterion. VAN-A27R_AUA01A00 extends from the confluence of Aquia Creek with Cannon Creek, approximately 0.1 rivermile downstream from Route 610, and continues downstream until Smith Lake (Aquia Reservoir). Sufficient excursions from the maximum *E. coli* bacteria criterion (3 of 15 samples - 20.0%) were recorded at DEQ's ambient water quality monitoring station (1aAUA014.51) at the Route 641 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 2004 through 2006. The *E. coli* bacteria impairment was first listed in 2006.

Segment VAN-A28E_AUA01B00 of Aquia Creek is listed as not meeting the (1) recreational water quality use standard (2) aquatic life use standard and wildlife use standard and (3) fish consumption use standard. Segment VAN-A28E_AUA01B00 extends from rivermile 4.28 to rivermile 3.28 in Aquia Creek encompassing a 0.5-mile radius around station 1aAUA003.71.

1. Recreational Use Impairment: Sufficient excursions from the maximum enterococcus bacteria criterion (4 of 24 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station (1aAUA003.71) at the railroad crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment.

2. Aquatic Life Use and Wildlife Use Impairments: For the 2004 assessment, more than two chloride exceedances were recorded within a three-year period resulting in an assessment of not supporting the aquatic life use goal. While the data within the 2008 assessment period show no exceedances at DEQ ambient station 1aAUA003.71, the impairment remains because no new data has been collected since the 2004 assessment period. This segment is considered transition zone tidal waters. The Water Quality Standards stipulate that the more stringent of either the freshwater or saltwater criteria apply. Therefore, these waters are listed as impaired. However, a TMDL is not necessary as the chloride levels are attributable to the natural estuarine conditions.

3. Fish Consumption Use Impairment: The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 4/19/99 and modified 12/13/04, limits consumption of American eel, bullhead catfish, channel catfish less than eighteen inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the consumption of carp and channel catfish greater than eighteen inches long. The affected area includes the tidal portions of the following tributaries and embayments from the I-395 bridge (above the Woodrow Wilson Bridge) to the Potomac River Bridge at Route 301: Fourmile Run, Hunting Creek, Little Hunting Creek, Pohick Creek, Accotink Creek, Occoquan River, Neabsco Creek, Powells Creek, Quantico Creek, Chopawamsic Creek, Aquia Creek, and Potomac Creek.

In addition, it should be noted that all of the estuarine waters of Aquia Creek are listed as impaired for not meeting the fish consumption use due to PCBs in fish tissue. The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 4/19/99 and modified 12/13/04, limits consumption of American eel, bullhead catfish, channel catfish less than eighteen inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the

consumption of carp and channel catfish greater than eighteen inches long. The affected area includes the tidal portions of the following tributaries and embayments from the I-395 bridge (above the Woodrow Wilson Bridge) to the Potomac River Bridge at Route 301: Fourmile Run, Hunting Creek, Little Hunting Creek, Pohick Creek, Accotink Creek, Occoquan River, Neabsco Creek, Powells Creek, Quantico Creek, Chopawamsic Creek, Aquia Creek, and Potomac Creek.

The schedule for the TMDLs is

Recreational Use TMDL Due Date (VAN-A27R_AUA01A00): **2016**
PCBs in Fish Tissue – **Approved 10/31/2007.**
Recreational Use TMDL Due Date (VAN-A28E_AUA01B00): **2020**
Aquatic Life Use/Wildlife Use Impairment (VAN-A28E_AUA01B00) – Impairment will be removed in the 2010 Assessment Cycle based off updates to the standards as part of Triennial Review. No TMDL required.

27. Additional Comments:

Previous Board Action(s): There has been no previous Board action associated with this VPDES Permit since it is a new issuance.

Staff Comments: None.

Public Comment:

EPA Checklist: The checklist can be found in Attachment 6.